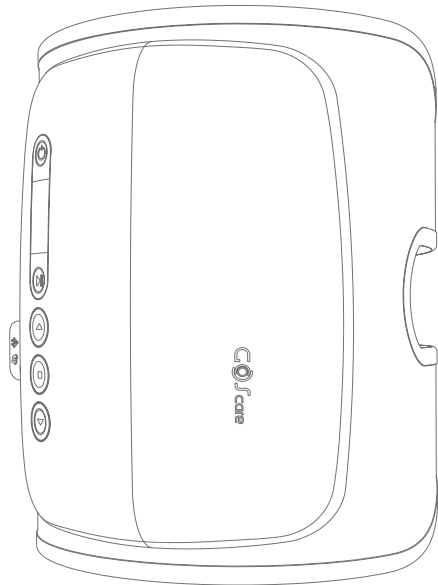


Functional Electrical Stimulation

GOSCAR SERA

Surface Electrode Functional Muscle Electrical Stimulator User Manual



지오에스

Read and use the user manual carefully before using the product.



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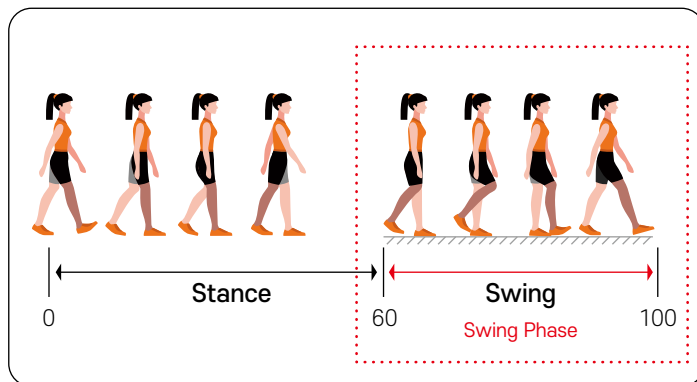
Chapter 1. Introduction

1.1 Overview

GOSCARE SERA is a functional electrical stimulator that assists and controls patients with suprachial walking due to central nervous system damage such as stroke, incomplete spinal cord injury, traumatic brain injury, cerebral palsy, and multiple sclerosis.

This product stimulates the patient's muscles by applying electrical impulses to the tibialis anterior and peroneal nerves, so that the ankle joint performs ventral flexion and raises the foot at the appropriate time while the user walks.

When using the Multi Foot Sensor, this product provides electrical impulses that cause flexion in the Swing Phase.



1.2 Intended Use

This product is used as follows.

- Prevent foot drop and walk training for hemiplegic patients due to stroke.
- Maintaining and increasing the range of motion of the patient with central nervous system injury and training for gait function.

1.3 Intended User

1.3.1 Doctors, Assistant Engineer, Caregivers, Physical Therapists

1.3.1.1 Training

- At least one of the following conditions must apply:
 - A doctor is a licensed doctor
 - A person who has passed the national examination after completing the relevant for an assistant engineer or a education care worker
 - Physiotherapists must complete their medical education and have medical qualifications
 - The caregiver of the patient shall be trained on this machine

1.3.1.2 Understanding

- At least one of the following conditions must apply:

Chapter 1. Introduction

- Understanding stroke, paraplegia, foot drop, etc.
- Basic Concepts for Functional Electrical Stimulation (FES) · Body positioning ability (measured area: below knee, fibula side) · Understanding Hygiene

1.3.1.3 Language comprehension

- Be capable of understanding the language of the user's manual or English (the languages provided in the user's manual).

1.3.1.4 Experience

- At least one of the following conditions must apply:
 - An assistant engineer or caregiver is a person who has experience with products similar to this device or related low-frequency therapeutic devices.
 - Physiotherapists have experience dealing with low-frequency therapists similar to or related to this device. Or, a person who has been in the medical industry for at least three years in relation to electrical stimulation.

1.3.1.5 Available disabled person

- Vision corrected by minor reading visual impairment or Log MAR 0.2 (6/10 or 20/32)
- If the hearing loss of both ears is less than 80 decibels each
- Upper extremity disorder to which the machine can be mounted on the leg

1.3.2 Patient

1.3.2.1 Understanding

- At least one of the following conditions must apply:
 - Ability to read and understand user manuals
 - Body positioning ability (measured area: below knee, fibula side)
 - Understanding Hygiene

1.3.2.2 Language comprehension

- Be capable of understanding the language of the user's manual or English (the languages provided in the user's manual).

1.3.2.3 Experience

- You should have at least experience with the relevant low frequency therapeutic devices similar to this machine.

1.3.2.4 Available disabled person

- Vision corrected by minor reading visual impairment or Log MAR 0.2 (6/10 or 20/32)
- If the hearing loss of both ears is less than 80 decibels each
- Upper extremity disorder to which the machine can be mounted on the leg

Chapter 1. Introduction

1.4 Indications For Use Stroke, Incomplete spinal cord injury, traumatic brain injury, cerebral palsy Patients suffering from paralysis due to central nervous system damage such as multiple sclerosis

1.5 Side Effects After use, temporary redness of the skin may occur, but it is naturally lost after a certain period of time, so no further treatment is required. Additional treatment is needed if blisters occur due to individual skin conditions, prolonged or too high intensity.

1.6 Pre-Use Inspection

- Be sure to read and use the user manual
- Do not use except for the purpose of use

Chapter 2. Safety Precautions



2.1 Danger

- This product is FES (Functional Electrical Stimulation) equipment. Users with thrombosis, heart disease, and irritation problems should consult a qualified doctor before deciding to use them.
- The following users are prohibited from using:
 - 1) A pacemaker or implantable defibrillator user
 - 2) Life-support equipment user
 - 3) A user who is deemed unfit by a pregnant woman or doctor's diagnosis
 - 4) Malicious tumors, acute diseases, and users who cannot express their opinions
 - 5) A user with a seizure disorder
 - 6) A user have fractures in leg, dislocations who are likely to experience physical impairment due to electrical stimulation of the product
 - 7) Users who are dizzy or unable to maintain an equilibrium
(This product does not provide the ability to prevent falls.)
 - 8) Do not use this product if you are transplanting an electrode device into your body (e.g., a pacemaker).. (Except when a professional medical opinion is submitted)



2.2 Pre-Use Precautions

1) Common Precautions

- (1) This product is divided into two modes and detailed settings. When using each mode and setting, it is recommended that you set it up or change it in accordance with expert consultation or instructions.
 - Auto mode : The foot sensor is not connected. Mode in which the user is lying down or sitting on a chair.
 - Walking mode : The foot sensor is connected. This mode is suitable for users who want to combine active exercise with electrical stimulation. When using Walk mode, start walking with healthy legs.
 - Detailed settings : You can change the instrument's detailed settings.
- (2) Avoid dramatically increasing the intensity of the stimulus. Sudden strong output can cause shock or muscle paralysis and skin burns.
- (3) Be careful when operating electrodes in the vicinity of the chest, as this may increase the risk of cardiac defibrillation.

2) When used in a hospital or other treatment institution

- (1) Be careful when applying electrical stimulation to users suspected of heart disease.
- (2) Do not apply electrical impulses to legs with open wounds, metal objects such as surgical staplers.
- (3) Be careful when used in the vicinity of flammable environments such as oxygen anesthetics.

3) When used in home

- (1) Do not apply electrodes directly near the head, near the heart, near the aorta, or near the occipital.
- (2) Do not apply irritation to the eyes, mouth, front of the neck (especially carotid artery), or place electrodes on top or across the heart, such as near the chest and chest.

Chapter 2. Safety Precautions

- (3) Take care as there is a risk of suffocation due to the charger or foot sensor connection line.



2.3 Warnings

1) Common Precautions

- (1) Do not use this product without electrodes (pad).
- (2) Do not use more than the recommended time, as this increases the risk of irritation or skin burns. (The average daily use time is 2 hours, and the recommended use time is 20 minutes.)
- (3) The use of worn electrodes (pads) may increase the risk of skin problems.
- (4) Turn off this product before disconnecting or replacing the electrode (pad).
- (5) Use with water on legs, hands, products, electrodes (pads) or components may cause electric shock.
- (6) Turn off the power when you are not using this product.
- (7) This product cannot be used while charging.
- (8) If battery replacement is required or is not in use for a long time, contact your place of purchase. Do not attempt to replace the battery at random. The battery cannot be replaced by the user.
- (9) Using a damaged charger or charging in a damp area can cause damage, fire, or injury to the product.
- (10) Do not store this product in a place that may exceed the recommended storage temperature (15°C to 35°C). Extreme temperatures can damage components.
- (11) Check electrode (pad), foot sensor for 'GOS' or 'GOScare' label and use our product.
- (12) The safety and efficiency of this product depends on the proper use and handling of the product. Improper use may result in personal injury. Periodically check the consumables for wear and replace them as required by requesting A/S from the place of purchase.
- (13) Wear, damage, and excessive impact on this product cause the product to fail. (Excessive impact: kneeling while wearing the product, impact from a hard surface, falling, etc.)
- (14) Software updates for this product will be carried out by the manufacturer.
- (15) If you encounter any technical problems that are not covered in the user manual, never attempt to disassemble or repair the product, but contact your place of purchase.

2) When used in a hospital or other treatment institution

- (1) Do not use simultaneous connection and operation of high-frequency surgical instruments, high-frequency hospital equipment, as this product may cause burns to the electrode connections and cause damage to the product.
- (2) Do not use with electronic monitoring equipment such as an EKG.
- (3) Operations in close proximity to short-wave or microwave-treated medical devices (e.g., 1 m) can cause instability in the electrical stimulation output of this product.

3) When used in home

- (1) Stop using this product until the inflammation of the electrical stimulation area is gone, as inflammation in the area can be aggravated by muscle activity or pressure.

Chapter 2. Safety Precautions

- (2) Do not use lotion or oil on the skin to which the electrode (pad) is to be attached.
- (3) Do not use this product in situations where unexpected or unusual irritation may occur, such as driving or powered operating equipment (e.g. cars, electric kickboards, lawnmowers, etc.).
- (4) Do not wear it while sleeping or bathing.
- (5) It should be used in consultation with a specialist or in accordance with instructions.
- (6) Do not attach the electrode (pad) to any location other than the Tibialis Anterior and calf nerves.
- (7) It should be kept out of reach of children.
- (8) Consult your doctor immediately when swallowing small parts of this product.
- (9) If you experience any of the following unexpected events, stop using the product immediately and consult your doctor.
 - Sign of injury due to significant irritation or pressure
 - Skin irritation and burns due to electrodes (pad).
 - When muscle spasms increase rapidly
 - When heart-related changes occur during stimulation (intermittent pain, difficulty breathing, etc.)
 - Swelling of knees, legs, ankles or feet occurs.
 - Other unexpected responses
- (10) If it is inconvenient to use, turn off the product and remove it from the leg.



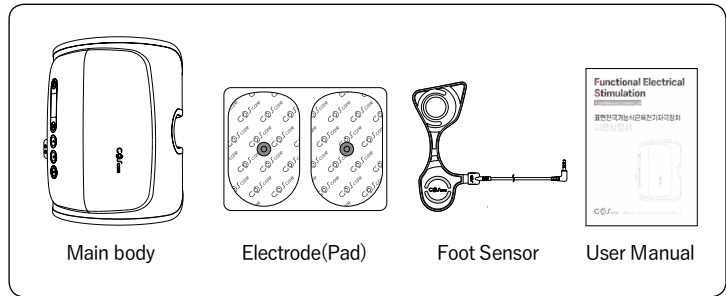
2.4 Cautions

- 1) Be sure to read and use the user manual before using this product.
- 2) When the electrode (pad) is detached, the skin surface may appear red as a temporary phenomenon, but it will disappear after a certain period of time.
 - Use of this product for more than the recommended time specified in the user manual may cause redness of the skin surface or rash as a side effect. If this continues, immediately discontinue use of the product and recommend consulting with a physician.
- 3) Sometime an allergic reaction to electrode (pad) adhesives may occur. If you are allergic, consult your doctor before deciding whether to use it.
- 4) When removing electrodes (pad) from the skin, pain may occur depending on the individual.
 - Hair removal of the stimulation area in personal judgment.
- 5) We recommend that you use the product with the help of an expert.

Chapter 3. Description each component and Function

3.1 Description each component

1) Components



2) Functional Description

(1) Main body (SERA-L, SERA-R)

※ The main body (SERA-R, SERA-L) can be selected at the request of the consumer.

SERA-R



SERA-L



Strap in SERA-R

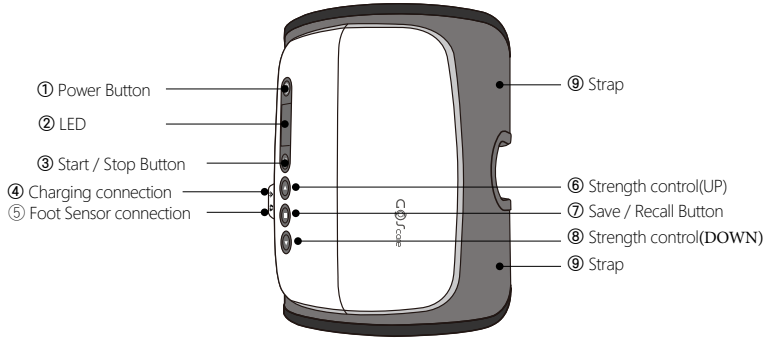


Strap in SERA-L



Chapter 3. Description each component and Function

Exterior Description (Front)





No.	Name	Description	ICON
①	Power ON/OFF	Power on/off button for product	①
②	LED	Stimulus intensity, motion status indication	—
③	Start / Stop	Convert to Start or Stop button	▶
④	Charging connection	Where to connect the charger Use charger (8.4V, 1A or 1.5A) use the specifications given	⚡
⑤	Foot Sensor connection	This is the place to connect the foot sensor and the main body. It is used in walking mode.	👣
⑥	Strength control(UP)	Stimulus strength and direction buttons (up)	▲
⑦	Save / Recall	When the product is in operation : Save Current State When the product is stationary : Calling up saved stimuli	■
⑧	Strength control (DOWN)	Stimulus strength and direction buttons (down)	▼
⑨	Strap	Used to secure the body to the leg, adjust the strap to fit the user's leg by placing it in a hole.	—

Chapter 3. Description each component and Function

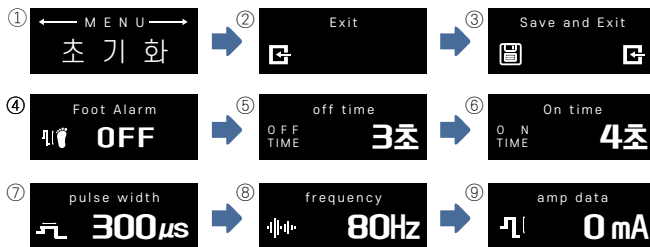
- LED

1) Auto mode , Walking mode



①	Save, Recall, Working, Stop, etc.	
②	Battery quantity	
③	 Auto mode icond	 Walking mode icon
④	Strength display	
⑤	Unit display (mA, uS, seconds, Hz, etc.)	

2) Detail Settings



①	Set all values to the first product shipped
②	Exit the detail settings
③	Save your changes and exit the detail settings
④	Foot sensor Sound ON/OFF
⑤	Set the time when no electrical stimulation occurs
⑥	Set the time at which electrical stimulation occurs
⑦	Setting the length of a stimulus
⑧	Set the number of times stimulated for 1 second
⑨	Setting the intensity of a stimulus

Chapter 3. Description each component and Function

- Exterior Description (Side)



No.	Name	Description
①	Charging connection	Where to connect the charger when charging the device
②	Foot sensor connection	Where to connect the foot sensor terminals when using the walk mode

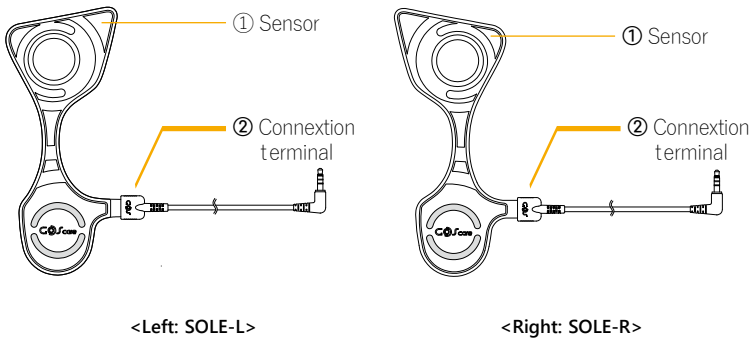
- Exterior Description (Rear)



No.	Name	Description
①	Strap holder	Used to secure the device to the user's legs
②	Strap Hole	Strap Hole
③	Harness	Connecting the snap button part of the electrode (pad) of the component to transmit electrical stimulation to the leg

Chapter 3. Description each component and Function

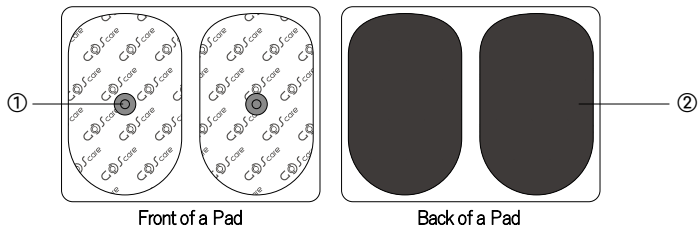
(2) Foot Sensor (SOLE-L, SOLE-R)



No.	Name	Description
①	Sensor	Detects user foot pressure in contact with sensor ground
②	Connection terminal	The part that connects to the main body and transmits the value of the user's foot pressure detected by the sensor part to the main body.

- Walking mode is used for actual walking, and foot sensors are used only in walking mode.

(3) Pad (POLAR58)



No.	Name	Description
①	Snap button	Connecting to the harness on the body and delivering electrical stimulation to the legs
②	Electrode plate	Attached to the leg to receive electrical stimulation from the instrument

Chapter 3. Description each component and Function

- (4) Extension Strap (C-STRAP) - Separately purchased



- C-STRAP is a strap extension and is used when the main strap length is short and cannot be fastened to the leg.

3.2 Product Performance

1) Size, Weight

- (1) Main body

- Size(Includes Stlap) : (Width × Length × Height) 530 × 207 × 68mm (±10%)
- Main body Size : (Width × Length × Height) 135 × 180 × 30mm (±10%)
- Harness Size : 80mm (±30%)

(2) Foot sensor : (Width × Length) 71.04 × 170.81mm (±10%), Cable length 470mm (±10%)

(3) Electrode (Pad) : (Width × Length) 50 × 80mm (±10%)

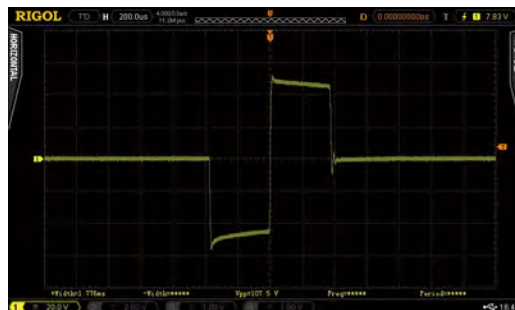
(4) Extension Strap - Separately purchased : (Width × Length) 180 × 53mm (±10%)

2) Safety

With the power switch on, press the motion button to output stimulation.

3) Product Specifications

- (1) Pulse width : 100 ~ 500 μ s (±10%)
- (2) Output Frequency : 1 ~ 120Hz (±10%)
- (3) Voltage pulse amplitude : 0 ~ 80 (±10%)
- (4) Maximum Output : 0 ~ 80mA (±10%)
- (5) Output waveform : Square wave



Square wave

Chapter 3. Description each component and Function

3.3 Product characteristics






1) Protection against electric shock

Internal power supply, BF type

2) Electrical rating

- (1) Rated voltage : 8.4
- (2) Power consumption: 1.8 VA or less

3.4 Symbol

Symbol	Meaning	Symbol	Meaning
	Caution		Consult Instruction for use
	ON/OFF		BF
	Recycling of Waste Electrical and Electronic Products		

3.5 Environmental conditions (Storage)

- Temperature : 15 ~ 35°C
- Relative humidity : 25 ~ 75% R.H.
- Atmospheric pressure range : 700 ~ 1060hPa

Chapter 4. Description of operation

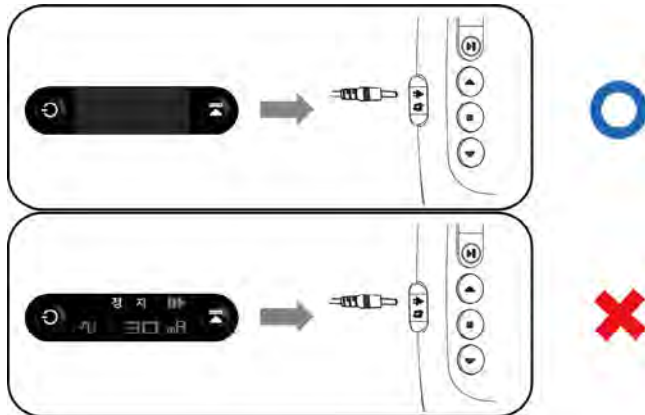
4.1 Pre-use Prepare

- Be sure to thoroughly understand how to use it.
- It is easy to damage due to impact, so be careful.
- Use away from dust or flammable substances.
- Make sure that the things that you want to connect to the body are properly connected.
- When using foot sensors, use shoes with hard insoles.
(If the insoles are soft, the foot sensor may not operate smoothly.)

1) Check Product Charging

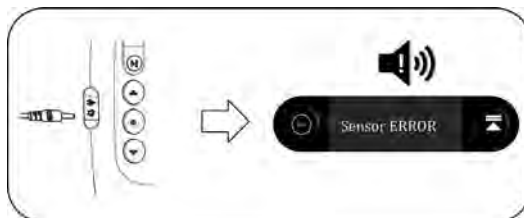
- When charging the product is required, connect the charger to charge it.

※ It is a product that cannot be operated and charged at the same time and must be charged with the product turned off.



※ When connecting the charger to the foot sensor connection on the product body, the product will not charge.

(When connecting the charger to the foot sensor connection with the power on, an audible warning appears with the 'Sensor ERROR' statement, and the screen and the audible warning do not sound when switched off.)

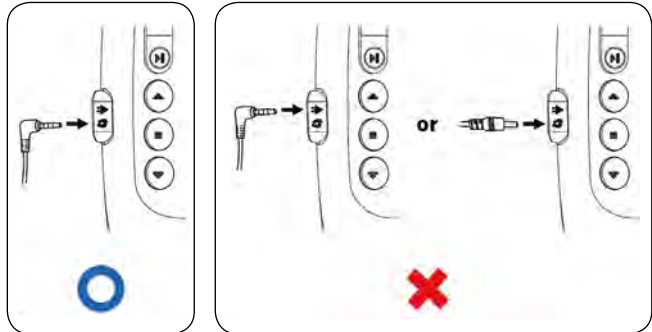


- ※ It takes about 1 hour to fully charge and can be used for more than 2 hours and 30 minutes after buffer. Turn off the power of the product when not in use.
- ※ This product does not charge and use at the same time. Verify that the product is charged before using it.

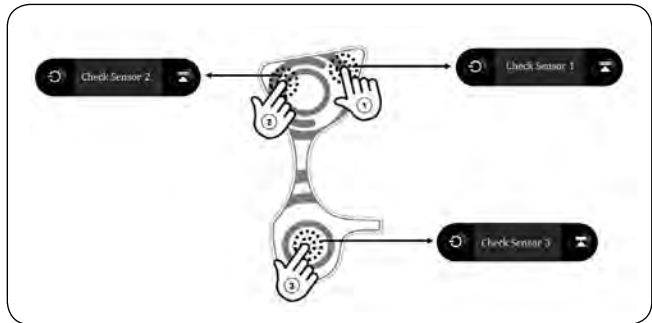
Chapter 4. Description of Operation

2) [When walking mode] Check the foot sensor

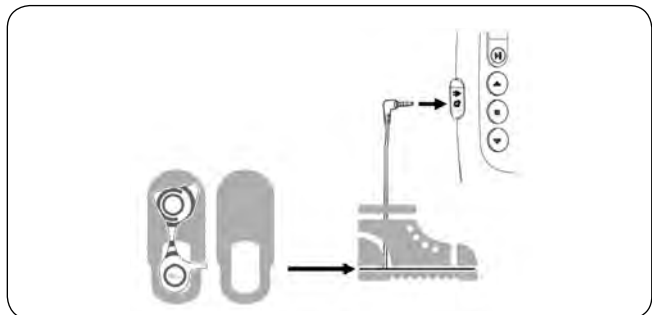
- Ensure that the foot sensor terminals are correctly plugged into the product.
(If not connected correctly, the 'Sensor Error' statement and warning tone appear.)



- When the foot sensor is engaged to the body, 'Check Sensor' must be performed.
From 1 to 3, place on a flat surface and press with your hand to complete the check.



- Make sure the foot sensor is inserted correctly into the shoe.



Chapter 4. Description of Operation

3) Check electrode (pad)

- Remove the protective paper from the electrode (pad) and attach the electrode to the leg. Plug the snap of the connecting line attached to the product into the snap button on the electrode (pad).
- The electrode (pad) must be attached in the correct position.
 - ※ If the snap is not properly connected, the correct stimulation is not possible.
 - ※ If the electrode (pad) is incorrectly positioned, the correct stimulation is not possible.

4) Check Strap

- Damage to straps (torn, punctures, etc.) may cause the product to fall off the legs.
 - ※ Straps cannot be replaced by users and must be requested to the place of purchase for repair.

5) Skin check

- Lotion, oil and water can cause improper irritation and electric shock, so the skin of the legs to which the electrodes (pad) are to be attached must be dry and clean.

Chapter 4. Description of Operation

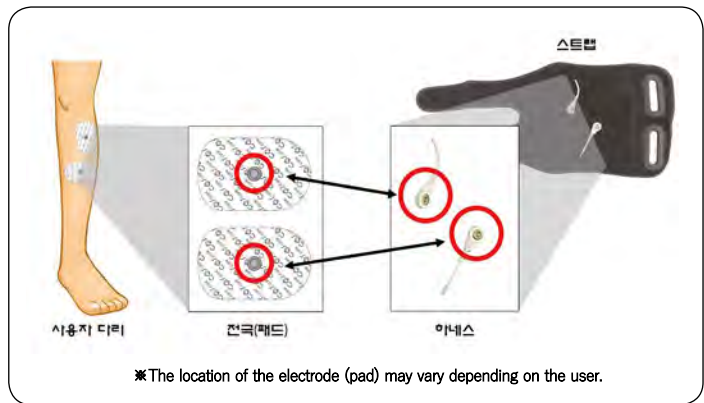
4.2 Operating Method

1) Auto mode

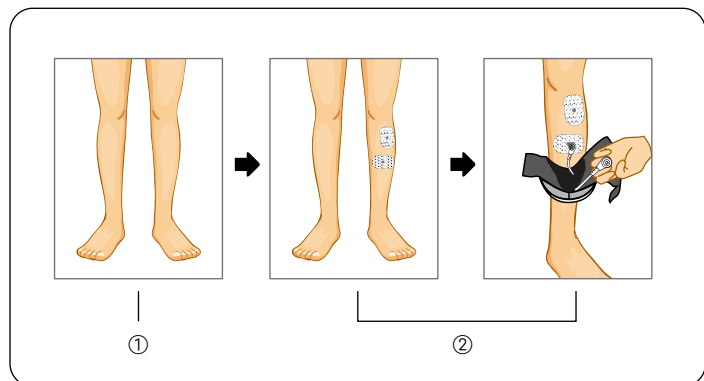
The foot sensor is not connected.

When using auto mode, the user can use it while lying down or sitting on a chair.

- ① The user sits down and straightens the legs where he wants to use the product.
- ② Attach the electrode (pad) to the leg and connect the connection line of the product with the electrode (pad).

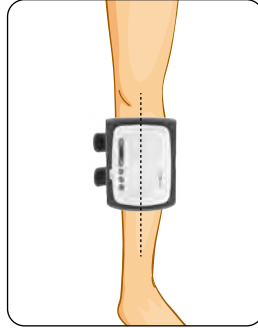



※Electrode (pad) attachment method

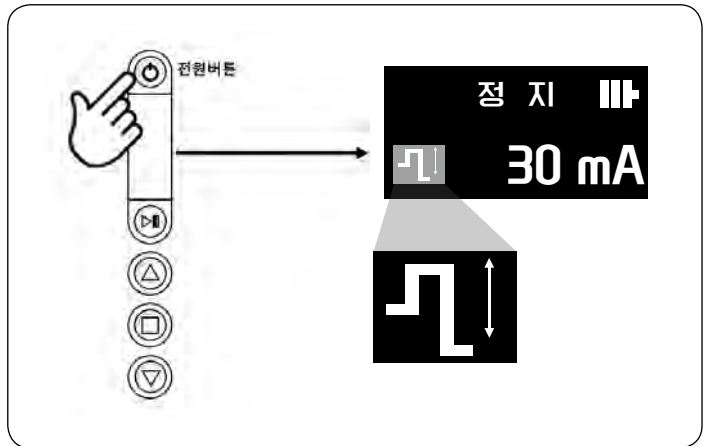


Chapter 4. Description of Operation

- ③ Make sure that the button on the body is to the right by the user and that the center incision of the instrument is to be placed in the middle of the Tibia.

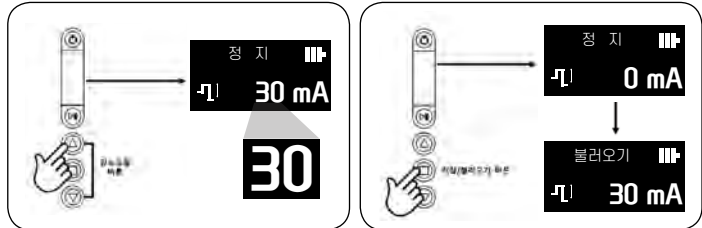


- ④ Press the power button to turn on the power.
 (Verify that the  'Auto Mode' icon is present on the screen.)

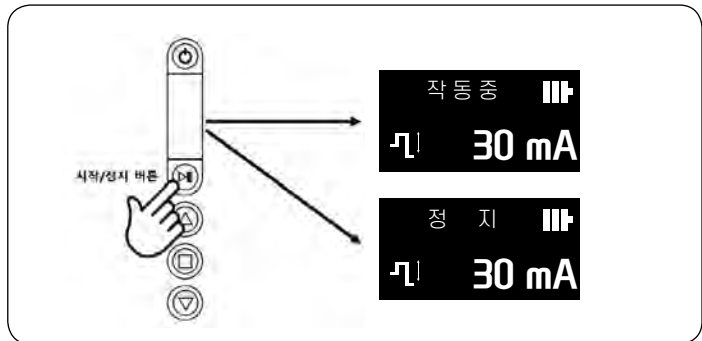


Chapter 4. Description of Operation

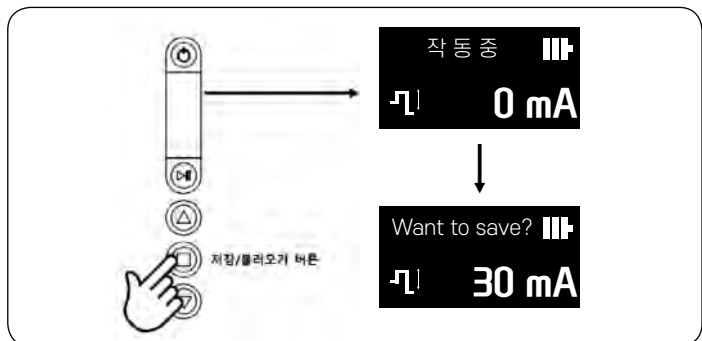
- ⑤ Use the intensity control button (UP/DOWN) to set the individual level. Stored stimulation must be When stationary, press the Save/Recall button to recall.



- ⑥ Press the Start/Stop button to activate the product.
⑦ Press the Start/Stop button to stop operation when you want to.

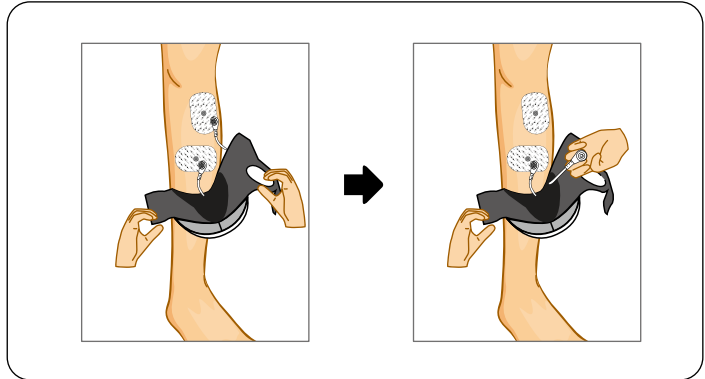


- ⑧ When you want to save the current stimulus, press the Save/Recall button during operation to save it.
- Press the Save/Recall button to display the message 'Want to save?', press the Save/Recall button one more time to save, or not press the button one more time to not save.



Chapter 4. Description of Operation

- ⑨ After use, press the power button to exit.
- ⑩ Loosen the straps, remove the connecting lines from the product body and the electrode (pad), and remove the body from the leg.



- ⑪ Remove the electrode (pad) from the leg and attach the protective paper.
- ⑫ Store in a box for maintenance.

- ※ Stimulation is output for 4 seconds and the interval between stimuli is 3 seconds.
... Repetition
- ※ The average daily use time is 2 hours and the recommended use time is 20 minutes.
- ※ For skin ventilation, remove the product from the legs after irritation, and do not use it for longer than the recommended time of use.

Chapter 4. Description of Operation

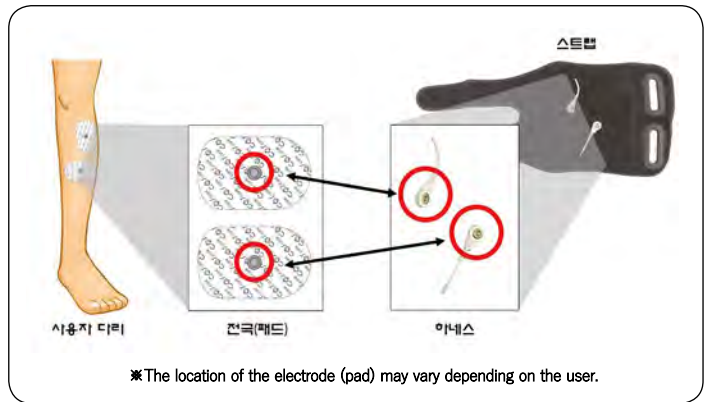
2) Walking mode

The foot sensor is connected.

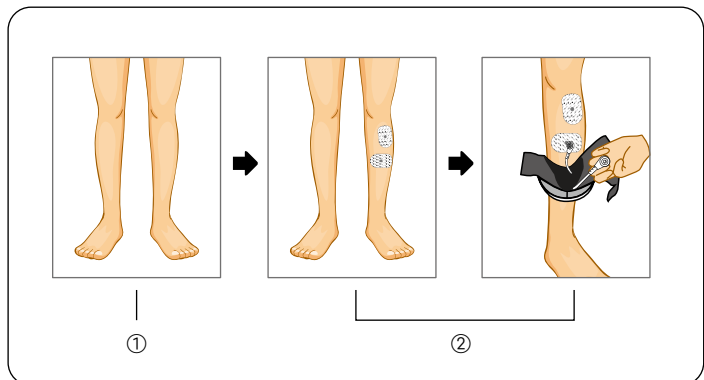
Walking mode is suitable for users who want to combine active exercise with electrical stimulation.

When using Walk mode, start walking with healthy legs.

- ① The user sits down and straightens the legs where he wants to use the product.
- ② Attach the electrode (pad) to the leg and connect the connection line of the product with the electrode (pad).

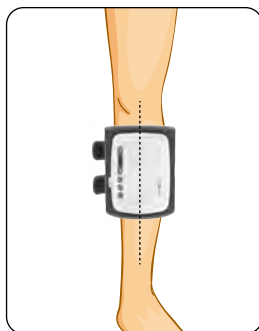


※Electrode (pad) attachment method

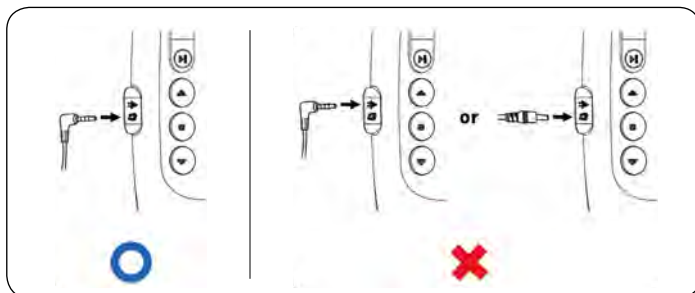


Chapter 4. Description of Operation

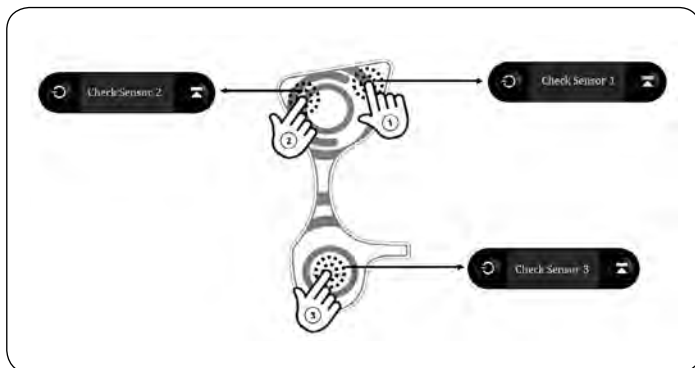
- ③ Make sure that the button on the body is to the right by the user and that the center incision of the instrument is to be placed in the middle of the Tibia.




- ④ Connect the foot sensor terminal to the foot sensor connection.

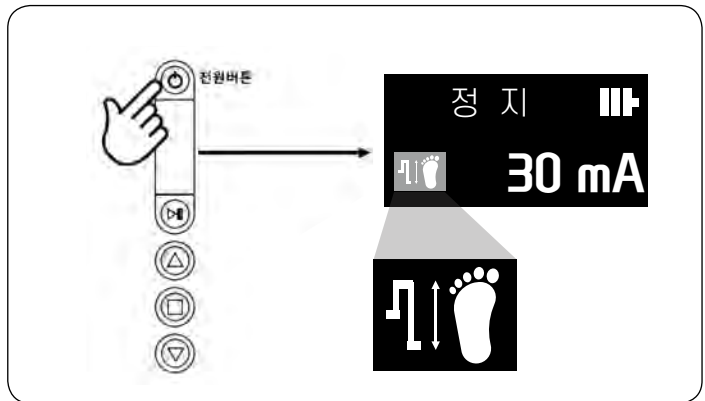
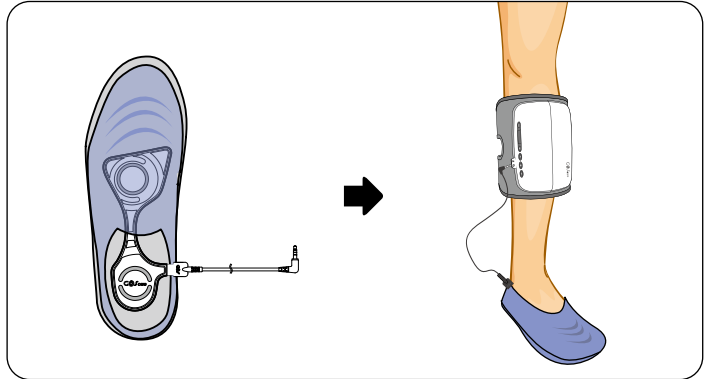


- ⑤ Press the power button to turn on the power, put the foot sensor on a flat surface and press it with your hand to complete 'Check Sensor'.



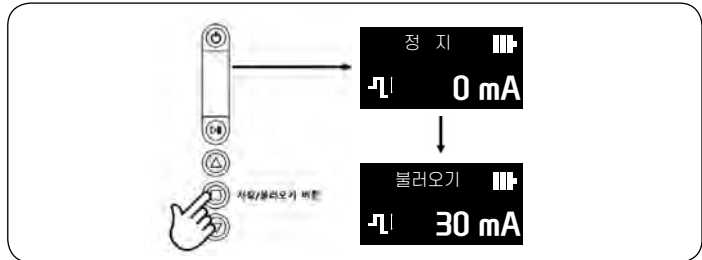
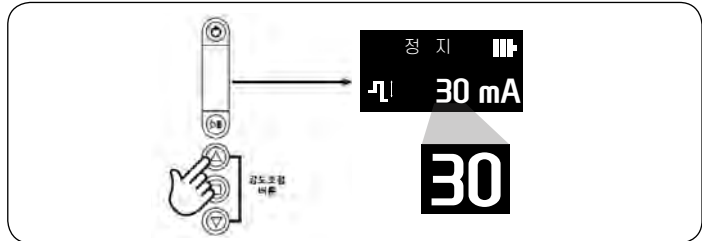
Chapter 4. Description of Operation

- ⑥ Wear shoes with foot sensor inserted
(Verify that the 'Walk Mode' icon  is present on the screen of the body.)

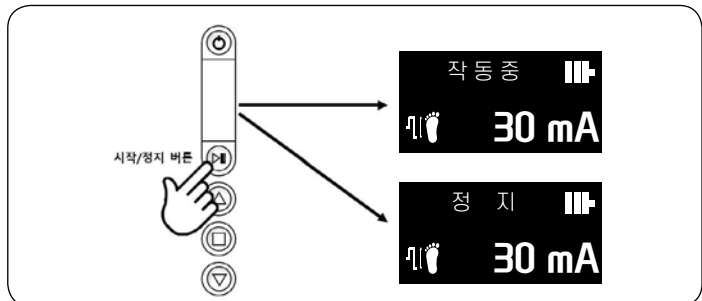
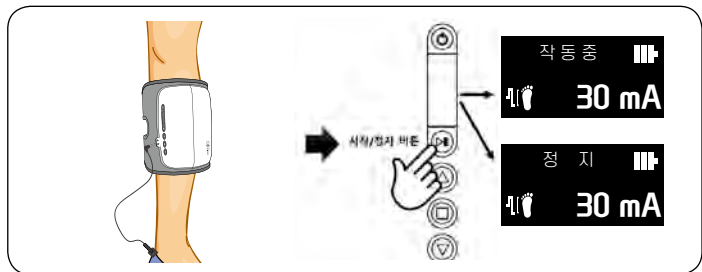


Chapter 4. Description of Operation

- ⑦ Use the intensity control button (UP/DOWN) to set the individual level. Stored stimulation must be When stationary, press the Save/Recall button to recall.

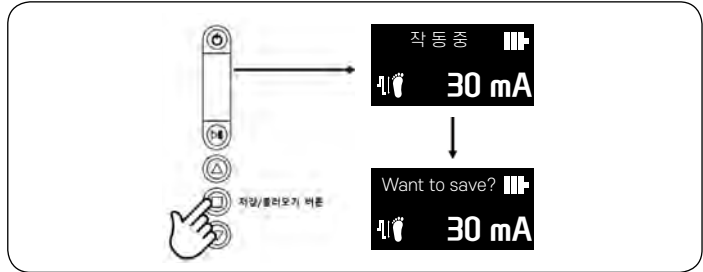


- ⑧ After you stand up, press the Start/Stop button to activate the product.
(Start walking with healthy legs.)
- ⑨ Press the Start/Stop button to stop operation when you want to.

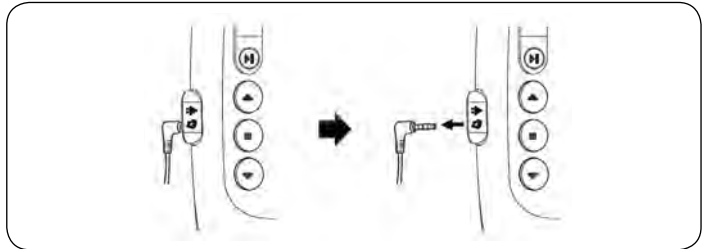


Chapter 4. Description of Operation

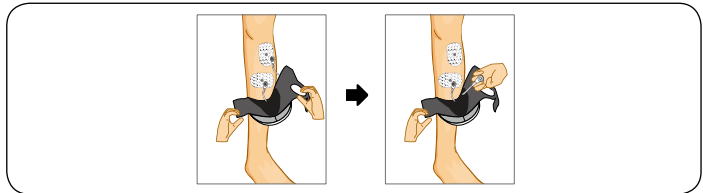
- ⑩ When you want to save the current stimulus, press the Save/Recall button during operation to save it.
- Press the Save/Recall button to display the message 'Want to save?', press the Save/Recall button one more time to save, or not press the button one more time to not save.



- ⑪ After use, press the power button to exit.
- ⑫ Disconnect the foot sensor terminal connected to the product (main body).



- ⑬ Loosen the straps, remove the connecting lines from the product body and the electrode (pad), and remove the body from the leg.



- ⑭ Remove the electrode (pad) from the leg and attach the protective paper.
- ⑮ Store in a box for maintenance.

- ※ Stimulation is output for 4 seconds and the interval between stimuli is 3 seconds.
ex) 4 second stimulation output, 3 second stop, 4 second stimulation output, 3 second stop ...
Repetition
- ※ **The average daily use time is 2 hours and the recommended use time is 20 minutes.**
- ※ For skin ventilation, remove the product from the legs after irritation and do not use it for longer than the recommended time of use.

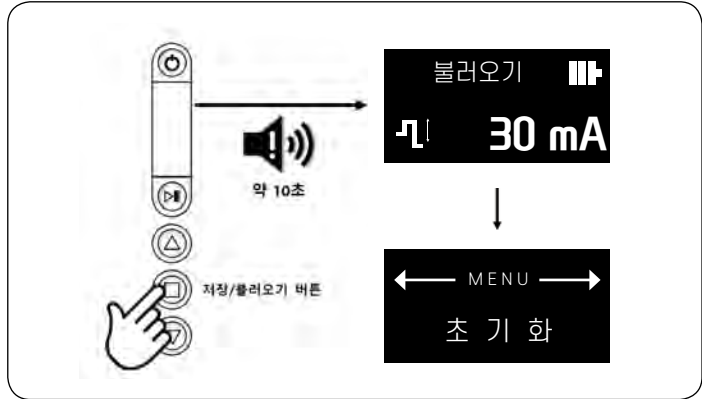
Chapter 4. Description of Operation

3) Detail Settings

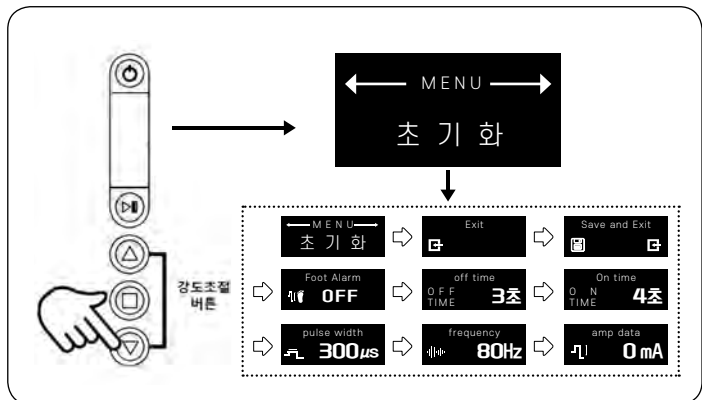
① How to use

- Enter Details Settings.

: Turn on the power and press the Save/Recall button until the screen changes.
(approx. 10 seconds)

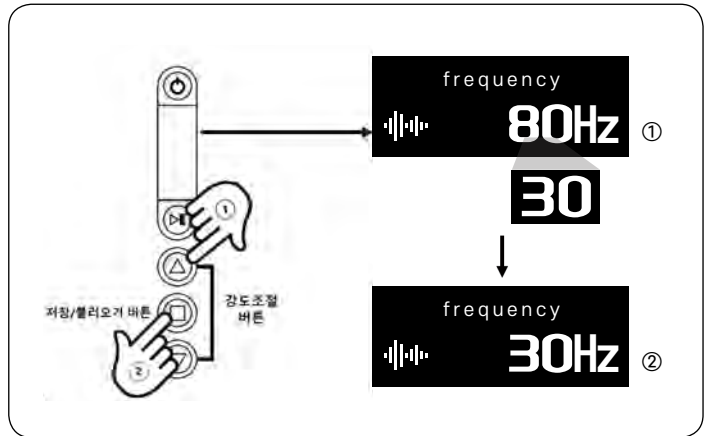


- Use the intensity control button (UP/DOWN) to move the menu.

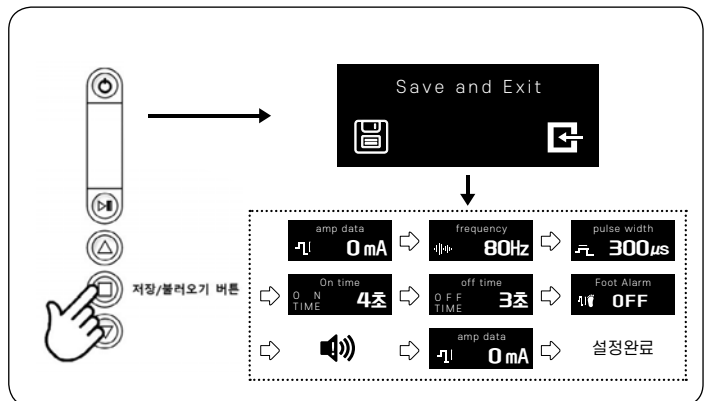


Chapter 4. Description of Operation

- Press the Save/Recall button to enter the desired menu.
- After entering the desired menu, use the intensity control button (UP/DOWN) to change the value, and after the change, press the Save/Recall button to save.



- Press the intensity control button (UP/DOWN) to go to the next menu.
 - Press 'Save and Exit' when all menu values have been changed.
- When saving and leaving, the settings appear on the screen once to check the changed values and leave [Detailed Settings].



※ The same settings in Detailed Settings apply in Automatic mode and Pedestrian mode.

※ [Detailed Setup] recommends setting up or changing based on consultation or instructions with a specialist.

Chapter 4. Description of Operation

② Menu Order

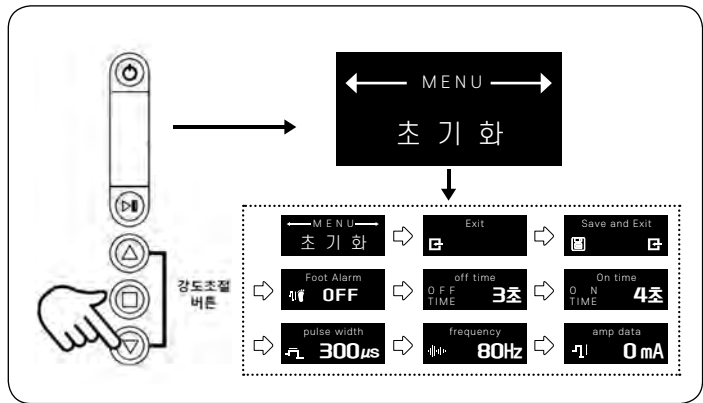
After entering [Detailed Settings], press the "DOWN" button.

'Reset → Exit → Save and Exit → Foot Alarm → off time → on time → pulse width → frequency → amp data' It appears in order.

※ The Foot Alarm is 'off' when the product is first received.

※ The amp data is '0' if there is no irritation to receive and save the product for the first time.

ex) After receiving the product, save the amp data as '15' and enter [Detailed Settings], the amp data is set to '15'.



Chapter 4. Description of Operation

③ [Detail Settings] menu

Reset

← MENU →

초기화

Set all values to the first product shipped

Press the Save/Recall button to initialize.
Press button to display message and press once
more to complete initialization.

Exit

Exit



Exit from [Detail Settings]

Press the Save/Recall button to exit.

Save and Exit

Save and Exit



Save your changes and exit

Press the Save/Recall button to save and exit.

Foot Alarm

Foot Alarm

 OFF

Foot sensor sound on/off

You can turn the foot sensor sound on and off
when walking.

Off time

off time

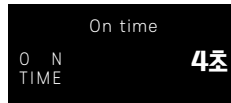
OFF TIME 3초

When there is no irritation

Press the intensity control button (UP/DOWN)
to set the 'seconds' and press the Save/Recall
button to save.

Chapter 4. Description of Operation

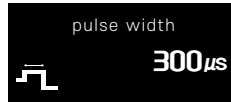
On time



When the stimulus comes

Press the intensity control button (UP/DOWN) to set the 'seconds' and press the Save/Recall button to save.

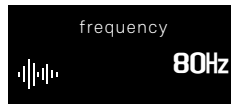
pulse width



Stimulus length

Press the intensity control button (UP/DOWN) to set 'µs' and press the Save/Recall button to save.

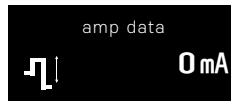
frequency



Number of times stimulated for 1 second

Press the intensity control button (UP/DOWN) to set 'Hz' and press the Save/Recall button to save.

amp data



The intensity of the stimulus

Press the intensity control button (UP/DOWN) to set 'mA' and press the Save/Recall button to save.

Chapter 4. Description of Operation

4.3 Precautions for Operation

1) Main body

- Turn off the power source as there is a risk of electric shock if liquid enters the product while being stimulated.

2) Electrode (Pad)

- Remove the protective paper and use the electrode (pad).
- The electrode (pad) and the body connection must be connected to ensure proper stimulation.

3) This product is divided into two modes and detailed settings.

When using each mode and setting, it is recommended that you set it up or change it in accordance with expert consultation or instructions.

- Auto mode : If moving during operation, there is a risk of injury, so be careful not to move.
- Walking mode : When the foot sensor and the product are disconnected, the stimulation stops and switches to automatic mode to stop, so be careful not to disconnect the foot sensor terminal from the product during walk mode.
- Detailed settings : You can change the instrument's detailed settings.

4) Charging

- Charging and use does not occur at the same time, so charge the product before using it.

※ The recommended usage time is 20 minutes. Care should be taken not to use more than the recommended hours of use, as this may cause skin redness, blisters, burns, etc. when the pads are attached to the legs.

4.4 Emergency Situation

In the following situations, turn off the power immediately and contact the place of purchase.

- Where sudden or sudden high intensity stimulation is given
- A large amount of liquid is contained or smeared in the product during operation : Turn off the power immediately and remove the product from the legs as there is a risk of electric shock.

Wipe the surface of the product with a dry cloth, and when the liquid enters the product, do not disassemble it yourself and contact the place of purchase.

4.5 Maintenance and Cleaning

1) How to Manage After Use

(1) Product Management

- Remove the product from the leg.
- Remove the connection line of the body connected to the electrode (pad).
- Do not clean as there is no waterproof function. If it is contaminated, wipe it with a dry cloth to take care of it.

Chapter 4. Description of Operation

(2) Foot sensor management

- If damaged foot sensors are used, they cannot be properly stimulated and require periodic checks.
- Foot sensor is consumable. For proper stimulation, if there is any damage to the foot sensor terminals (connections) or sensor parts, make sure to replace the foot sensor before using it.

(3) Electrode (Pad)

- If damaged electrodes (pads) are used, they cannot be properly stimulated and require periodic checks.
- Do not wash the electrodes (pad) in water.
- Replace electrode (pad) if damaged (hole, tear, loss of adhesion, etc.).

2) How to store after use

- Store in a non-direct, non-humid, well-ventilated room.
- Store in a safe place from inclination, vibration and shock.
- Store in a place free from moisture
- Do not store chemicals or gas in places where they are generated.
- Storage conditions are as follows:
 - Temperature : 15 ~ 35°C
 - Relative humidity : 25 ~ 75% R.H.
 - Atmospheric pressure range : 700 ~ 1060hPa

(1) Retain Products

- Do not load items on the product, but keep them in mind for storage conditions.

(2) Foot sensor storage

- If you don't replace them with other shoes, keep them in the shoes you use.

(3) Electrode (Pad)

- Post-use protective paper should be attached to prevent the electrode (pad) from losing adhesion.
- Avoid storing electrodes (pad) at too high a temperature.

Chapter 5. Daily inspection

5.1 Daily inspection

※ Please contact your place of purchase or request A/S in case of the following situation.

1) Battery

- If the charger is fine, but it takes a long time to charge it, or if it is not charging well, (If the battery is completely exhausted, it may take longer to Charge.)

2) Electrode (Pad)

- Electrode (pad) can be reused, but must be replaced after a period of use. Reuse over a long period of time may weaken irritation and reduce adhesion. (Washing in water can cause problems with the product.)

3) Foot sensor

If the connection to the product does not show the wording of the sensor check or the sensor check does not work, try the following method.

- Reconnect the foot sensor.
- Remove the foot sensor and cycle power to the product.
- Initialize the product.
- If you connect to the product but do not see the Walk Mode icon on the screen, proceed with initialization and use a new foot sensor if the problem is not resolved.
- If the above method is not resolved, you must request A/S to the place of purchase.

4) Button

- Button is torn, poorly pressed, or not recognized

5) Charger

- If the charger line or terminal is damaged, replace it with a new charger.
- Recommended charger specification is '8.4V, 1A or 1.5A'. Use of a different standard charger or damaged charger may cause product and battery failure.

6) CASE(Main body)

- If the product is damaged

7) Strap

- Damage to the straps (broken, torn, not secured) has occurred

※ For problems that are not resolved in the user manual, contact your place of purchase.

Chapter 7. Disposal

7.1 Guidance on disposal procedures

- There are no user-available parts in this product. In addition, this product cannot be disposed of by the user. Therefore, if the service life of the product is over or if disposal is desired, it must be returned to the place of purchase without disassembly.



- This symbol indicates recycling of waste electrical and electronic products and should not be treated as household waste.

Chapter 8 Consumables Purchase and A/S

8.1 Consumable item list and Purchase path

- Electrode (pad)
- Foot sensor
- Extension strap

※ You can buy it at your place of purchase.

8.2 A/S

- Contact your place of purchase to request A/S.

8.3 Warranty

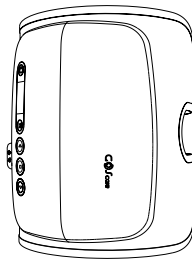
The warranty period for the product is one year from the date of purchase.

- If the product has a problem with its function in normal use according to the instruction manual or product label, request the A/S to the place of purchase.
- If it is difficult to verify the warranty period, the warranty period will be applied for one year, starting with the date three months after the manufacturing date.
- The place of purchase may charge the customer for the A/S cost.
- The place of purchase is determined by our regulations whether the product will be repaired or replaced if it does not operate properly during the warranty period.

This product is manufactured and distributed after thorough quality control and inspection, and the quality is guaranteed according to the above.

- WARRANTY -

모델명	GOSCAR SERA
제품번호	
고객명	
보증기간	
구입처	



Manufacturer : GOS

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